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COMMONWEALTH PHYTOPATHOLOGICAL NEWS

A QUARTERLY REVIEW OF NEWS AND VIEWS ISSUED BY THE COMMONWEALTH MYCOLOGICAL INSTITUTE, KEW, SURREY

THE SIXTH COMMONWEALTH MYCOLOGICAL CONFERENCE, JULY 1960

J. J. Elphick
Commonwealth Mycological Institute

It is now thirty-six years since the Honorary Management Committee of the Imperial Bureau of Mycology convened the first Imperial Mycological Conference. This early venture was so successful that the delegates resolved that further Conferences should be held every five years in order that plant pathologists from the United Kingdom and Commonwealth countries overseas could continue to meet regularly and discuss their problems. Despite the interruption of the orderly quinquennial series by the second world war and other less disastrous contingencies this resolution has been adhered to ever since, and the Sixth Commonwealth Mycological Conference was duly held in London in July.

Plant Protection

As this year's Conference was scheduled to follow immediately after the 7th Commonwealth Entomological Conference, a valuable opportunity arose to consider topics of interest to both branches of plant protection. A joint session was therefore arranged, and delegates to both Conferences met at the Memorial Hall of the Royal Geographical Society on July 14th. The morning was devoted to various aspects of the relationship between plant viruses and their vectors and vector control by means of insecticides. In the afternoon, discussion centred upon the link between research and its practical application, papers from Canada, the U.K., Kenya, and Nigeria outlining the organization of such services in these countries. This welcome scientific liaison between entomologist and plant pathologist was extended into the social field that evening, when delegates to both Conferences attended an official reception at Lancaster House, where they were addressed by Lord Hailsham, Minister for Science. The process was carried a stage further the following evening when overseas delegates were the guests of the President and Council of the Institute of Biology at an informal reception held at the Institute's headquarters.

Official Opening

On Friday July 15, the official opening of the Conference took place in the spacious main lecture theatre of the London School of Hygiene and Tropical Medicine. As the Conference assembled, delegates from the five continents met and exchanged greetings. Some, such as Dr. J. B. Lebeau from Canada, were attending their first, and it is hoped the first of many, such Commonwealth gatherings; others were old friends, among them Dr. B. L. Chona of India, Dr.

The Editor does not necessarily agree with opinions expressed in C.P. NEWS by correspondents whose forum it is.

COMMONWEALTH MYCOLOGICAL INSTITUTE 3 OCT 1960

Lee Ling, the official observer from F.A.O., and Dr. C.J. Magee from Australia. However, the title of Father of the Conference must undoubtedly go to Dr. C.H. Cunningham of New Zealand, probably the only delegate present who attended the first Conference in 1924. At the opening session there was a memorable moment when, after welcoming the delegates, Mr. A. Perera, Chairman of the Executive Council of the C.A.B., presented to Mr. E.W. Mason a copy of the new "Herb. I.M.I. Handbook". This handbook was prepared by many former colleagues to commemorate Mr. Mason's recent retirement after nearly forty years' service at the C.M.I. Mr. Perera's tribute to this veteran mycologist's sterling work in the cause of sound taxonomy was warmly echoed by all those present.

After the Director had reported to delegates on the work of the C.M.I. since the previous Conference, the meeting was opened to visitors and the first of the paper-reading sessions, which were to occupy most of the following week, was held. An account of the C.M.I. information services, including a most interesting analysis of trends in the literature of plant pathology as shown by representative volumes of R.A.M. from 1924-1958, provoked lively discussion. A plea for the publication of review articles to supplement R.A.M.'s abstracts received wide support, but a suggestion to change the title of R.A.M. to one more descriptive of its present coverage received a mixed reception. After lunch, a taxonomic session included papers on the present-day relationship between taxonomy and plant pathology, accounts of the work and services offered by the C.M.I. Herbarium, Culture Collection and Bacteriology laboratory, and also of the National Collection of Plant Pathogenic Bacteria at Harpenden, while Dr. A.L. van Beverwijk of the Centraalbureau voor Schimmelcultures, Holland, discussed the vexed question of the status of cultures as types.

Papers on Pathology

During the following week a wide range of topics was covered. Monday morning was devoted to root diseases, the basidiomycetes here holding numerical advantage with Armillaria mellea on tea, Fomes lignosus on Hevea, and Fomes annosus on conifers, but there were also interesting accounts of Fusarium wilt of cotton, and of root rot of banana in Australia initiated by the nematode Radopholus similis. The present state and future prospects of seed testing were discussed that afternoon by those three leading protagonists of seed health, Drs. Mary Noble, P. Neergaard, and J. de Tempe. On Tuesday, we had excellent sessions on the forecasting and assessment of losses from plant disease in the morning and on fungicides in the afternoon. Mr. E.C. Large's account of the development of the potato blight forecasting service in Britain showed how accurate such services can be when based on thorough groundwork and adequate data; Dr. E. Hainsworth's survey of losses from crop diseases in Kenya emphasised that while effective control is in many cases a practical possibility it may not always be economic, although many of the major crop diseases could be adequately controlled by the cheap process of seed treatment. On Thursday, the final open sessions of the Conference produced further valuable contributions, the main subjects considered being virus diseases, cereal rusts, and diseases of cacao. There were accounts of the suppression of symptoms of phloem necrosis virus in tea by the transfer of infected plants to areas of higher temperature, of an unusual latent infection by abaca mosaic virus in the Philippines, of the theoretical basis of breeding for rust resistance, and of the economic and taxonomic aspects of black pod of cacao. It has been possible here only to indicate the general scope of these excellent sessions; the full text of the papers and discussions will be published early next year in the official report of the proceedings. On Friday, the indoor activities of the Conference terminated with the usual final business sessions. It must be recorded that the smooth running of these meetings was greatly facilitated by the kindness of the Dean and staff of the L.S.H.T.M. who, besides allowing the use of their lecture theatre and highly efficient projectionists, generously provided many facilities for the secretariat and allowed delegates full use of their first-class refectory.

Presentation of "Herb. I.M.I. Handbook" to Mr. Mason by the Chairman
(Photo: The Fairlight Co. London W.1.)

Excursions

As has become the custom on these occasions, during and after the Conference delegates were given the opportunity to visit various research establishments in this country. On Saturday July 16, the C.M.I. was the focus of attention and put on many demonstrations of current work and techniques. The staff were delighted to make personal contact with so many distinguished friends and gained much from their talks with them; we sincerely hope that the benefit was not all on our side. On the following Wednesday there was a most enjoyable excursion to the John Innes Institute*, when delegates joined forces with the Annual Plant Pathology Field Meeting of the B.M.S. During the week following the Conference a good number of delegates remained to attend visits to the National Vegetable Research Station at Wellesbourne, the Glasshouse Crops Research Institute at Littlehampton, to Rothamsted Experimental Station and the Plant Pathology Laboratory at Harpenden, and finally to Plant Protection Ltd. at Fernhurst and to I.C.I.'s Jealott's Hill Research Station. Although this was England and July, the rain for the most part mercifully held off and delegates were able to walk dry-shod around these famous establishments, where they were everywhere most cordially received and showed great interest in the many demonstrations of recent research projects.

On Thursday July 28 the last of our visitors dispersed. From the comments of those with experience of past Conferences it it clear that the high standard of previous years was fully maintained. Indeed, the excellence of the papers, the liveliness of the discussions, and the friendly atmosphere of every meeting were clear indications of the healthy state of progress made and the co-operation existing among plant pathologists in the Commonwealth.

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* See FROM NEAR and FAR

LIBRARY CONFERENCE

by Shiela Daniels

The University & Research Section and Reference, Special, & Information Section of the Library Association, held their first joint Easter week-end conference in the Barber Institute, Birmingham University, from 8 to 10 April. The theme of the conference was 'The Library and the Research Worker'.

The number of delegates was 200 and these were accommodated in Manor House and University House, about 2 miles and half a mile, respectively, from the Barber Institute. Miss Daniels, assistant librarian, represented the C.M.I.

The theme of the conference indicated many common problems between both sections, but in fact the interests of the delegates diverged widely, so that separate sessions, if not separate conferences, would have been a better plan.

The first address was given after the conference dinner by Sir Arthur Thomson, formerly Dean of the Faculty of Medicine in the University of Birmingham, his theme being that original work owed little to libraries, being rather the intelligent interpretation of chance happenings. He allowed, however, that workers stood on the shoulders of those who had gone before and that it was necessary to be aware of what had already been published in order to interpret observations correctly.

The second address was given by Mr. I.A. Shapiro, Senior Lecturer in English Literature in the University of Birmingham. He described the needs of his type of research, which entailed comparing 17th century editions with later ones and came forward with the suggestion that for a library with little money to spend, index material, particularly journal indexes, are a good investment, if the journals themselves can not be bought.

The third address, given by Mr. A.L. Smyth, Commercial Library, Manchester Public Libraries, concerned the research worker and the public reference library, where research covered a wide field including the interests of businessmen and students and the spare-time pursuits of members of the public, involving such things as railway locomotives. The question of inter-library loan came up in the form of TELEX, whereby requests are transmitted by closed-circuit television.

The fourth address, on the research worker and the technological library, was given by Mr. W. Ashworth, Librarian, British Nylon Spinners. Mr. Ashworth is the author of a well-known book on Special Libraries and in his paper stressed the need for the proper training of librarians in information work. There was an exhibition of mounted photographs illustrating the work of his library, together with a sample of the red nylon carpeting used in the library, which, apparently, encouraged readers to walk quietly in the non-carpeted areas also. He showed how careful costing was combined with a very generous library budget. The librarians, scientists themselves, relieved the research staff of all scanning responsibilities.

The final address was given by Mr. K.W. Humphreys, Librarian of the University of Birmingham, and concerned British library resources and the needs of research. The necessity and difficulty of obtaining library staff with qualifications in Chinese and Russian was stressed.

Visits to Libraries

There were visits to the University Library and Barnes Medical Library, but the excursion to the Coventry College of Technology was cancelled. I therefore joined the excursion to Stratford, visiting the library of the Shakespeare Institute, which makes much use of microfilm. It was reminiscent of C.M.I. in its delightful situation, occupying an old house which once belonged to Marie Corelli, and in its international character, as it conducts seminars for students of Shakespeare coming from all over the world. We also visited the library attached to Shakespeare's birthplace and saw many ancient legal documents of the town and early printed books.

I.C.I. (Metals) Library was an interesting example of a very busy industrial

library. Intensive subject cataloguing is done by the Universal Decimal Classification.

In addition to the above programme, there was a concert and a library film.

NEW APPROACH TO FIREBLIGHT CONTROL

MINISTRY TO PAY FOR DESTRUCTION OF TREES

INFECTED WITH FIRE BLIGHT IN PRIVATE GARDENS

[This lead, given by the U.K. Ministry of Agriculture, Fisheries and Food, may be of interest to plant protection officers in other Commonwealth countries. Ed.]

Owners of trees infected with fire blight in private gardens will in future have the choice of either destroying the trees themselves or having them destroyed by the Ministry of Agriculture; in the latter case, the Ministry will bear the whole cost. This is the effect of an amendment to the Fire Blight Disease Order, 1958, made by the Minister of Agriculture, Fisheries and Food. With private gardens the readiness of owners to report suspected outbreaks is an important link in the campaign to eradicate the disease. Some private owners may have been reluctant to report the disease for fear of the expense to which they might be put in destroying infected trees. They will now know that, if asked to do so, the Ministry will destroy such trees without cost to them.

Much has already been achieved with the co-operation of commercial growers, local authorities and many private householders. It is hoped that under these new arrangements, all private householders will co-operate so that the existence of the disease becomes known speedily and this source of infection is stamped out.

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FROM NEAR AND FAR

On the occasion of its 50th anniversary on 8 July the name of the John Innes Horticultural Institution, Bayfordbury, Herts, was changed to 'The John Innes Institute'.

Microcard Reader Model 6B is now being manufactured in England for the basic price of £98. Further details from Recordak Division of Kodak Ltd., 1-4, Beech Street, London, E.C.1.

The annual congress of the Société mycologique de France will be held in Paris from 15 to 23 October 1960.

Fire blight is spreading in south and east England and the Ministry is instituting a more vigorous eradication campaign. Some 20 field workers are reinforced by plant pathologists and extension officers in a house-to-house inspection and in the Southend district alone some 1,200 trees have been condemned. It has now been reported on pear, hawthorn, whitebeam, firethorn, cotoneaster, and in August, on apple. [See p. 53.]

Publications of Interest

COMPENDIUM OF PLANT DISEASES (Philadelphia, Pa. Rohm & Haas Company, pp. 264, 1959). Over 120 excellent coloured plates (4 colour lithophotography). Diagnosis symptoms and control measures in general terms because of constant appearance of new products on the market. Selected diseases of 47 crop plants are dealt with in a manner suitable for students and extension officers. The plant pathologist will also find here a useful ready reference.

POTATO BLIGHT EPIDEMICS, A.E. Cox and E.C. Large (Washington D.C., U.S.D.A. Agric. Handbook 174. Gratis). A most excellent account written in some detail of the painstaking survey of recent epidemics of potato blight, compiled from published literature, but more generally from unpublished personal communications to the authors (of the Plant Pathology Laboratory, Harpenden) from over 70 leading plant pathologists and other workers throughout the world. In view of the pressing need for more accurate estimates of crop losses in relation to control warning programmes this survey provides a model for adaptation to other crop diseases of major economic importance. The work was subsidised by the Wisconsin Alumni Foundation of U.S.A.

AQUATIC HYPHOMYCETES 2nd Ed. (F.K. Sparrow, Jr., Ann Arbor, Univ. Michigan Press, pp. 1187, 91 fig., 1960. $22.50). A second and much enlarged edition of the well known work.

AN INTRODUCTION TO THE BIOLOGY OF MICRO-ORGANISMS, Hawker, Linton, and Folkes. (Lond. William Clowes, 1960. 35s.). Has the distinction among text books on microbiology of recognizing the fungi as social equals of bacteria and viruses. Excellent illustrations and invaluable for teaching.

INDIAN POTATO JOURNAL. A new half-yearly publication devoted exclusively to the problem of potato cultivation (including diseases); started in April 1959. Published by the Indian Council of Agricultural Research (Dr. Rajendra, Prasad Road, New Delhi, India). Annual Subscription: Rs. 6.00 (single copies Rs. 3.00).

A CATALOGUE OF THE LINNEAN HERBARIUM, compiled and annotated by Spencer Savage (1945). (Pp. xvi × 226, frontisp., 8 plates and pull-out leaf.) 60s. net.

LINNAEAN HERBARIUM. Microfiche record of the 14,000 specimens in the Linnaean Herbarium. Excellent reproduction on 850 microfiches completed in 1959. Price £100.

MR. F. HOWARTH RETIRES FROM I.C.

Mr. F. Howarth, Assistant Director of the Botanical Laboratories at Imperial College, retired on 30 September, 1960. Mr. Howarth came to Imperial College as an undergraduate in 1915, was away on war service during which he was wounded and spent 18 months in hospital, then returned to the Botany Department, and later became a member of the Academic staff in 1921.

He rapidly established a reputation as a teacher, particularly of the lower groups of plants, and of cytology, and genetics. Because he was so good and stimulating at this, generations of undergraduates must be thankful that Mr. Howarth was for many years responsible for much of the undergraduate teaching. He was, therefore, more in touch with undergraduates than most members of the Academic staff and this, coupled with his deep concern with their problems and welfare, has meant that many who left immediately after graduating came to identify Mr. Howarth with the Botany Department itself.

There are few who could undertake the duties and responsibilities which Mr. Howarth gradually acquired, so that apart from any more personal considerations, his retirement leaves a gap which cannot be filled. The esteem which so many of us have for Mr. Howarth was well shown at the Dinner held in his honour on 15 July, which was attended by 125 of his friends; many more would have been present had they been able. Tributes were paid to Mr. Howarth and his work by Sir Patrick Linstead, Rector of Imperial College, and by one of Mr. Howarth's earliest students, Sir Eric Ashby, Master of Clare College, who presented him with a camera and a handsome cheque on behalf of nearly 200 friends who had contributed towards the presentation.

Although Mr. Howarth retired officially in September, we are all glad to know that he will continue to spend some time in the Department because he has accepted a commission to write a history of Botany at Imperial College.

He will now have the wishes of all who knew him for a long and happy retirement.

R.K.S. Wood

F.A.O. SEED YEAR

As part of its efforts for the production of enough food for everybody in the light of the ever-increasing world population, the F.A.O. has for some time now emphasized the importance of first class seed of superior varieties and has been promoting its widespread use by education, demonstration, publicity and other means. The peak of all these efforts will be the WORLD SEED YEAR of 1961.

The World Seed Campaign is primarily a matter for individual governments. All the member countries of F.A.O. have been requested to set up National Seed Campaign Committees, appoint liaison officers with F.A.O., and plan effective National Seed Campaign programmes. The following technical measures have been suggested: introduction of improved varieties, intensification of plant breeding and varietal research, multiplication of high quality stock seed, establishment of seed certification schemes, improvement of seed testing facilities, organization of seed distribution and trade, and adoption of seed legislation.

Developed countries can make available to the less advanced countries their experts and knowledge through offering fellowships and training centres, films, filmstrips, slides and other visual aids, technical publications and equipment, publicity, and educational material.

To disseminate information on the campaign F.A.O. is publishing The World Seed Campaign News, issued primarily to National Seed Campaign Committees, in English, French, and Spanish. Each issue contains names and addresses of liaison officers, articles on problems of seed improvement, information on the plans of member governments, announcements regarding special contributions offered by governments or organizations, news and notes on current technical developments, and striking photographs, available for further publicity.

But all this will not accomplish the desired end unless seed guaranteed free from disease can be distributed.

PERSONAL NEWS

C.M.I. News

Major H.A. Dade, who was on the staff for twenty five years and Assistant Director since 1940 retired on 3 September (see appreciation elsewhere).

Delegates of the 6th Commonwealth Mycological Conference spent the day at the Institute on Saturday, July 16. In the afternoon a number of visitors also attended by invitation.

On September 1, the Commonwealth Review Conference of C.A.B. held their session at C.M.I. at which 30 delegates were present. Lunch was taken in the restaurant of the Royal Botanic Gardens, Kew. As an aperatif delegates were able to witness the capture of some huge carp from the Palm House lake for transfer elsewhere.

Visitors

Among overseas visitors were: Dr. G.H. Cunningham and E.C. Wratt, New Zealand; Dr. Matazo Abe, Japan; Dr. Mortimer P. Starr, U.S.A.; Dr. Naomi Gorodeisky, Israel; C.E. Mann, Malaya; Professor K.S. Bhargava, India; H.E. Nilsson, Sweden; H.P. Maas Geestenanus; J.S. Robertson, Nigeria; E.T. Iton, Trinidad; G. Stell, Jamaica; D.M. Corbett, Nyasaland; Dr. I.A.S. Gibson, Kenya; Dr. J.B. Lebeau, Canada; R.A. Fox, Malaya; Dr. B.L. Chona, India; P.K.S. Clinton, Tanganyika; N. Shanmuganathan and O. Peries, Ceylon; Dr. L.D. Wolfswinkel, South Africa; C.J. Magee, Australia; A.L. Wharton, Ghana; R.E. Wyatt, Nigeria; C.T. Pyne, Sierra Leone; D.A. Perry, Uganda; Dr. Agatha Beverwijk, Nederlands; R. Close, New Zealand; Dr. S.R. Rao, India; Dr. W. Rutschke, Germany; Dr. M. Davies, U.S.A.; Dr. Anne Markley, Turkey; Dr. Helen Buckley, U.S.A.; Dr. A.K. Asem, Ghana; Sir Arthur Coles, Dr. W. Ives, Dr. D.A. Gill, Australia; Drs. B.P. Beirne, W.P. Hamilton, P.H. Phelps, P.O. Ridley, G.M. Carman, and H.R. Trueman, Canada; Dr. J.W. Geyer and S.J. du Plessis, South Africa; and W.R. Mills, Uganda.

Dr. Thompson of Fison's Pest Control brought a party of 20 Colombo plan students.

Appointments, Promotions, Retirements, etc.

The Overseas Division of the Colonial Office announce the following: E.I. Hugh, assistant director of agriculture (field and extension), British Guiana, and G. Stell, chief plant protection officer, Jamaica.

Professor E.G. Cox has been appointed secretary, Agricultural Research Council, to succeed Sir William Slater.

Dr. V.H. Heywood has been appointed to a senior lectureship in botany at the University of Liverpool.

Mr. E.S. Hiscocks will assume duty as director of the Tropical Products Institute, London, towards the end of 1960.

Professor R.N. Robertson will succeed the late Professor J.G. Wood as professor of botany in the University of Adelaide, Australia, in 1962. Dr. H.B.S. Womersley is acting head of the department.

Mr. S. Edward Gamarekian has been appointed editor of DISCOVERY magazine. In recent years he was scientific correspondent for the WASHINGTON POST and came to Britain to report on scientific developments for the GUARDIAN.

OVERSEAS NEWS

CANADA

Mr. I. L. Conners, who has acted as Canadian correspondent for C.P. NEWS since its inception, has now moved up to another department where he is fully occupied with administrative work and finds that the phytopathological tit-bits by-pass him. He has therefore asked Mr. D.W. Creelman, editor of the Canadian Plant Disease Survey, to undertake this task and Mr. Creelman has kindly consented. Thank you Mr. Creelman. Thank you Mr. Conners. [Ed.]

Resistance to Clubroot in Swedes

Clubroot is a disease of economic importance in Canada in the production both of swedes and of other crucifers such as cabbage and cauliflower. No variety of swede grown on a commercial scale in this country is resistant to clubroot in all production areas. Experiments conducted at the Canada Department of Agriculture Research Laboratory, Charlottetown, P.E.I., have shown that there are several races of the clubroot organism present in Canadian soils: to date seven physiologic races have been recognized. The races are not all equally abundant and their geographical distribution appears to depend upon the particular crucifers previously grown in the area.

The swede variety Wilhelmsburger, which is grown principally for stock food, is susceptible to race 1 and two races only recently identified, but is immune to all other known races. As race 1, however, is not of general occurrence and the new races have been found only once and twice respectively, Wilhemsburger has proved resistant in most swede-growing areas in Canada. Laurentian swede, which is primarily grown for the table market, is susceptible to races 1, 2, 3, and 4, and the frequent occurrence of clubroot in this variety in the Atlantic Provinces arises from the rather wide occurrence of these races in greater or lesser amounts. Race 2 is the commonest race and many fields in Prince Edward Island are infested with mixtures of races 2 and 3. Race 4 has only been isolated once since the present studies began. Race 5, to which Laurentian swede is not susceptible, is the common race in the market garden areas south of Montreal, Que., in the Bradford Marsh in Ontario, and at Cordova Bay and Keating, B.C.

Hybrid purple top swedes resistant to clubroot have been developed at Ottawa, Ont., and at Nappan, N.S. The lines that have been developed so far are from numerous crosses made between resistant white turnips, such as White Milan and Roskilde, and the yellow-fleshed swedes, Wilhemsburger, Danish Giant, and Laurentian. The resistant hybrid lines are susceptible to race 1, but immune to races 2 and 3.

An important development has been the finding of roots of Laurentian swedes resistant to races 2 and 3 in commercial plantings of the variety in Prince Edward Island. The selected lines are now being increased at Charlottetown. A similar effort has been made to select resistant lines from Ditmars swede; one line immune to race 2, but susceptible to race 3, has been obtained.

F.S. Warren,
Agronomist,
Experimental Farm,
Nappan, N.S.

G.W. Ayers,
Plant Pathologist,
Charlottetown,
P.E.I.

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OPENING OF THE K.W. NEATBY BUILDING IN OTTAWA

On the evening of 16 June, 1960, the Honourable Douglas Harkness, Minister of Agriculture, officially opened the K.W. Neatby Building, headquarters of the Research Branch, Canada Department of Agriculture. A commemorative plaque to the late Dr. Neatby was unveiled by his widow, Mrs. Janet Neatby, and now occupies a commanding place on the wall in the foyer.

The occasion was graced by Members of Parliament, members of the diplomatic corps, and numerous friends and associates of Dr. Neatby, both in Ottawa and from a distance, as well as members of his immediate family.

After the dedication ceremonies the laboratories in the new wing were thrown open for inspection. Portions of the Canadian National Collection of Insects and of the Canadian Mycological Herbarium were open for inspection. By charts, diagrams, movie shorts, and display of equipment actually in operation the many facets of the research program were explained to the visitors by the staff. After the tour of the laboratories refreshments were served and the guests were able to meet each other for a social hour.

The building remained open all next day and evening to permit the general public to inspect the new facilities. It was estimated that over 2,000 persons, including scientists from other branches of government, their wives, and children visited the building.

Personal Notes

Dr. Harold A. Senn, Director, Plant Research Institute, Ottawa, left the Canada Department of Agriculture on August 31st. after 22 years service to join the staff of the University of Wisconsin, Madison, Wisconsin, as Director of the Biotron and Professor of Botany. Dr. Senn is recognized internationally as an authority on the design and operation of plant growth rooms and greenhouses in which environmental conditions are precisely controlled.

Dr. Waldermar E. Sackston, who has since 1958 been Head, Plant Pathology Section, Canada Department of Agriculture Research Station, Winnipeg, Manitoba, is leaving the Department on September 12th, after 19 years of service, to accept the post of Professor of Plant Pathology at Macdonald College, McGill University. Dr. Sackston's research with the Department has been focused on the diseases of oil seed crops and he has gained an international reputation as a specialist in the diseases of sunflowers and flax.

Dr. Jens J. Nielson, Goettingen, Germany, has accepted a post-doctorate fellowship to work with Drs. R. Rohringer and D.J. Samborski at the Canada Department of Agriculture Research Station, Winnipeg, Manitoba, on the obligate parasitism of the rust fungi. Dr. Nielson recently received his Ph.D. degree at the University of Goettingen for his studies on the obligate parasitism of Peronospora brassicae in cabbage under Prof. Dr. W.H. Fuchs, Director of the Institut für Pflanzenpathologie.

Dr. Gregoire L. Hennebert, Louvain, Belgium, has also accepted a post-doctorate fellowship to work at the Plant Research Institute, Ottawa. He will study, with Dr. S.J. Hughes, the taxonomy of the hyphomycetes, particularly of genera related to Botrytis and their host specificity. He has had a brilliant academic career and was awarded his D.Sc. degree at the Catholic University of Louvain this year. His thesis concerned a revision of the genus Botrytis, and was completed at the Laboratory of Plant Pathology under Prof. Dr. V. Estienne and Prof. Dr. P. Staner.

Dr. Ilkka Kukkonen, University of Turku, Finland, returned to Finland at the end of August after working for 13 months with Dr. D.B.O. Savile at the Plant Research Institute, Ottawa, on a post-doctorate fellowship. Dr. Kukkonen is engaged in a taxonomic and experimental study of the smut genus Cintractia.

In addition to working through the abundant material in the herbarium at Ottawa he has done extensive field work near Ottawa, in the arctic and sub-arctic, and in the Yukon and northern British Columbia. His detailed studies of these fungi and his extensive knowledge of the Cyperaceae will allow eventual revision of this extremely complex genus and will almost certainly lead to new information on the evolution of the host family.

Dr. John T. Slykhuis, Head, Plant Pathology Section of the Plant Research Institute, Ottawa, has accepted the invitation of the Australian government to make observations on cereal viruses in that country for a two-month period. During his absence from Ottawa he will also visit Japan, the Philippines, New Zealand, India, West Pakistan, Iraq, Jordan, and Egypt.

NEW ZEALAND

Dry Rot Resistance in Swede

A programme of testing swede varieties for their relative resistance to dry rot disease caused by Leptosphaeria maculans (Phoma lingam) has been carried out in New Zealand for about 6 years. During this time consistent differences in resistance have been found between different varieties using three different methods of inoculation into half grown bulbs.

The main methods used were 1) Using a hypodermic needle to inject a suspension of pycnospores. 2) Pushing into a bulb one end of a toothpick previously dipped in a pycnospore suspension. 3) Injection (to $\frac{1}{4}$ in. depth) of a mycelial and pycnospore agar jelly using a grease gun with sharpened injection point. The last method has been adapted as the most reliable and the most convenient field technique for inoculation of large numbers of bulbs. (Each operator can readily inoculate over 500 bulbs/hour by this method).

Between 20 and 100 bulbs are inoculated to each swede variety or selection under test and the results have shown that there has been a gradual improvement in the level of dry rot resistance in the Crimson King variety over the years these trials have been carried out. The unselected Crimson King variety obtained from several seed houses in England and Scotland have consistently shown between 0 and 2 per cent. of bulbs immune from dry rot.

The best N. Z. Crimson King line grown from resistant bulbs (previously selected from field crops severely infected with dry rot) showed 40 per cent. of bulbs immune in 1957. The best line of N. Z. Crimson King seed grown from the immune bulbs tested in 1957 showed 70 per cent. of immune bulbs in 1959.

Individual bulbs will be progeny tested during the coming season and it is hoped to have a satisfactory line of Crimson King with over 90 per cent. of bulbs immune to the dry rot inoculation test in the next stage of development. Small samples of this seed will be available this coming season for field trials during the 1960-61 season. No immune swede bulbs have yet been found in the two most widely grown swede varieties viz. N. Z. Superlative and N. Z. Grandmaster, and it is likely that very large numbers of these varieties will have to be grown to obtain resistant selections.

Wheat Stem Rust

The visit of Mr. E. Matheson of the N.S.W. Department of Agriculture last February to New Zealand provided a stimulus to the investigation of wheat stem rust in this country. The latest results of the N. Z. race identification of wheat stem rust received from Dr. I. Watson of the University of Sydney (based largely on the extensive collections of Mr. Matheson) have given additional support to the Australian origin of stem rust in N. Z. Stem rust was not found anywhere in N. Z. during the period April to November 1959. It was first found that year during early December in the North Island and in late December in the South Island. Again this year, stem rust has not been found in the field since April. In the glasshouse, however, wheat stem rust has been kept quite readily throughout both winters, but apparently there is no locality in N. Z. where stem rust survives happily outdoors. The common barberry grown as hedges in N. Z. has been found to be resistant, so does not appear to be an overwintering source. In Australia, however,

wheat stem rust has been found to overwinter quite readily in Queensland. It then spreads southwards into New South Wales and across the Tasman Sea to New Zealand. The latest additional evidence for the Australian origin of wheat stem rust each year has been provided by the rust race identification this year. In these results, the race ANZ 21-1 was not recorded at any location in the North Island.

This race (21-1), however, was prevalent in New South Wales the previous year and occurred quite frequently in collections made in the South Island (N. Z.). These results suggest that Queensland is the main source of stem-rust inoculum for the North Island of N. Z., and New South Wales is probably the main source for the South Island.

Apart from stem rust collections, another main purpose of Mr. Matheson's visit was to examine barberry for wheat rust infection to see if there was any possibility of N. Z. being a source of new rust races, which could return to Australia. However, no rust infection was found on barberry and in addition the absence of wind currents towards Australia and the very late seasonal occurrence of wheat stem rust in N. Z. make it extremely unlikely that N. Z. could ever be the source of wheat stem rust in Australia.

Appointments and Awards

Dr. I.D. Blair, Lincoln College, has recently been appointed reader in Microbiology and Mr. A.P. Mulcock of the same Department has been appointed a senior lecturer.

Dr. Harvey C. Smith, Plant Diseases Division, Lincoln, has been awarded a Canadian Research Fellowship tenable at the Plant Pathology Department, Department of Agriculture, Ottawa. He will be leaving N. Z. about mid-February and will work on the barley yellow dwarf virus under Dr. J. T. Slykhuis.

Dr. J. T. Slykhuis, will be visiting New Zealand for two weeks from the 15th November to survey virus diseases of grasses and cereals during the course of his world tour.

Dr. A. D. Thomson returned to the Plant Diseases Division, Lincoln, after completing his Ph. D. at Cambridge in Dr. Kenneth Smith's laboratory. He has already recognised several viruses not previously recorded in N. Z. and is investigating new methods of purification by differential sedimentation in sugar gradients.

Arrivals

Prof. John Robinson of the Ontario Agricultural College, Guelph, has arrived at Lincoln as the first N. Z. recipient of a Commonwealth University Research Fellowship. He will be spending two years working at the Microbiology Department of Canterbury Agricultural College and in association with University and D.S.I.R. personnel. His project will be on the microbiology of soil types which will be of special interest for the International Soil Science Congress, to be held in N. Z. in 1962.

Harvey C. Smith

INDIA

In the notes on chlorosis of Sorghum vulgare in the July issue of C.P. NEWS the vector of the virus is quoted as Peregrinus simplicia Dist. This is, in fact, a synonym of P. maidis (Ashm.).

Linseed Rust

The occurrence of the aecidial stage of Melampsora lini under natural conditions in the hilly tracts of Kangra District in Punjab (1, 000 ft. A.S.L.) has been reported for the first time in India. This may throw more light on the origin and

appearance of races of this organism in the country.

Cereal Rusts

Two new races of Puccinia graminis namely 14 and 162 have been picked up in India from the wheat crops of the last two years. A sub-biotype of race 21A has also been isolated from last year's crop.

One new race of Puccinia recondita has been isolated, which has been provisionally designated Race 131.

FUNGICIDAL CONTROL OF WHEAT RUSTS. In a comparative field fungicidal trial with 9 fungicides half a gallon of parzate liquid (19 per cent. disodium-ethylene-bis-dithio-carbamate) plus three quarters of a pound zinc sulphate per acre sprayed four times during the crop season at an interval of a fortnight beginning in the first week of February reduced the rust infection from heavy to traces, with corresponding increase in yield.

Wheat Bunts

T. foetida and T. caries occur in the hilly tracts above 5,000 ft. as infection by this bunt cannot take place at lower altitudes due to high temperatures prevailing at the time of sowing. In some localities, and even in the same field in Srinagar (Kashmir), both the Tilletia species may occur together. Seven races of T. foetida and 9 races of T. caries have been isolated from India so far.

New Records of Fungi

Some of the interesting new records for India of plant pathogenic fungi include Phoma lingam (Tode ex Fr.) Desm. on cabbage; Cochliobolus heterostrophus Drechsler on maize; Helminthosporium sorghicola Lefebvre and Sherwin, and Ascochyta sorghina Sacc. on Sorghum vulgare; Hyalopsora polypodii Magn. on Diplazium jaonicum; Uredinopsis syngrammes sp. nov. on Syngrammes fraxinea; Glomerella cingulata (Stonem.) S. & S. on Saccharum officinarum; Dasturella grewiae (Pat. & Har.) Thirumalachar on Grewia asiatica and Alternaria solani (Ell. & Ev.) Jones and Grout on Solanum pimpinellifolium.

R.S. Vasudeva

MALAYA

During 1958, laboratory screening tests of potential collar fungicides were carried out at the Rubber Research Institute by F.W. Hutchinson, and a selected few were submitted to small-scale field tests. None completely prevented superficial growth of Fomes lignosus from reaching the collar, and it remains to be seen whether the degree of inhibition obtained will suffice to supplement the inherent resistance of the plant to arrest further progress. Over 60 products have been tested against F. lignosus in culture, where the fungus displays remarkable adaptability to a wide range of chemicals. Laboratory studies are being concentrated on factors affecting the initiation and growth of rhizomorphs and on physiological variations between isolates.

Low pH in the inoculum stimulates rhizomorph initiation, early linear growth, and growth in thickness, whilst high temperature has the same effect. Rhizomorph growth will not occur unless the soil air is near saturation, and growth is most rapid when free water is available; but in the latter case, growth may be retarded if there is not enough free or dissolved oxygen. Temperature is a limiting factor if under 70°F.

The use of 2, 4, 5-T induces a more rapid stump decay than does sodium arsenite. The effect of adding copper is being investigated. With 2, 4, 5-T a high volume/low concentration combination gave more consistent results when used as a tree poison, though the difference was not apparent when application was to the stump of a felled tree. Studies on the rate of death of the roots of trees felled at

intervals after poisoning failed to give consistent results.

Observations are being made on a small scale on the destruction of stumps of felled trees in situ by burning after allowing them to become impregnated with saltpetre placed in auger holes, the stumps having been previously poisoned with sodium arsenite. Saltpetre was applied at intervals after felling and attempts were made to burn the stumps 3 and 6 months later. This was not successful as the stumps still remained green.

THE SECOND CONGRESS OF EUROPEAN MYCOLOGISTS

The second European Mycological Congress was held in Czechoslovakia from August 29 until September 4, 1960, and was followed by a mycological excursion to the eastern, or Slovakian, part of the country from September 4 to the 10th.

Two hundred and sixty people attended from 16 countries and about one hundred of these were from six of the countries in the Eastern European bloc. For the most part, at least for the British contingent, this was the first opportunity to converse with co-workers behind the iron curtain.

The Congress began on September 4 with a reception in Prague by the Czechoslovak Mycological Society. The following morning a paper reading session was held and in the afternoon a sight seeing tour of Prague. One was impressed by the large exposition to Darwin in the Prague National Museum: undoubtedly, the most popular western naturalist and scientist in the Eastern European countries.

On Tuesday morning, we left Prague for an excursion to Southern Bohemia and the Boubin Forest. This is a large reserve of "virgin" coniferous timber where the forest has reached its climax. Many interesting species of fungi, especially Polyporaceae, were found.

The evening was spent either at Pisek or Ces. Budejovice. The Czech habit of early rising did not impress us when the coaches left the hotels for the Wednesday excursion at 6.30 a.m.

These excursions were to Salmonovice, where peat bogs exist; and in the afternoon to the serpentine steppe of Mohelno. The coaches finally arrived at Brno about 9.30 p.m.

The following day an excursion was made south from Brno to the country around Hodonin. In this area very serious damage was evident on the tobacco crops due to blue mould (Peronospora tabacina) which has occurred in epidemic proportions throughout Western Europe this year. Heavy rust infections of wheat and other cereals were also observed.

In Brno, a wonderful exhibition of fungi was arranged which included not only one of the finest lay-outs of the larger fungi that we have ever seen but also excellent demonstrations of interest to plant pathologists. Enormous trees had been cut open to show rots caused by polypores. Photographs and other illustrations were of excellent quality and microscopes were available for examining microfungi. An unusual feature of the exhibition was the mushroom tasting room where visitors could taste different kinds of fungi cooked in various ways.

The Congress left Brno on September 2 to return to Prague, and areas of younger mixed coniferous trees were examined during the journey. The Czech habit of planting fruit trees alongside the road has much to recommend it — especially in September when these trees are full of fruit.

Saturday, September 3, was spent on an excursion to the Karlstejn forest, and for those who wished, to the famous castle there. In the evening, a banquet was held and the Congress closed with a paper reading session on the following morning. During the general meeting which followed this session it was proposed that the 3rd Congress should be held in Scotland in 1963 subject to an invitation being received from the British Mycological Society.

Following the Congress a week's excursion was arranged to the mycologically interesting moutainous region of Slovakia. Two parties were formed: one visited the High Tatras and was based on Stary Smokovec, near Poprad, and the other Banske Bystrica.

The High Tatras excursion proved to be of the greatest value, not only in the

collecting but in the time available to get to know people. New friends of many nationalities were made and many useful contacts established.

C. Booth

H. A. Dade, A.R.C.S.

C.M.I., 1935-60

On 3 September Major Dade retired after twenty-five years at C.M.I., which he joined in 1935 as Assistant Mycologist and Sub-Editor and of which he has been the Assistant Director since 1940.

Major Dade's enviable versatility and ingenuity will be much missed. Fifteen years in the Gold Coast gave him a sound grounding in tropical plant pathology and his activities at the Institute have contributed notably over the years not only to the editorial side - to the 'literary and philosophical department' in Mr. Mason's terminology - but also to the mycological, and especially to the Culture Collection which he developed so successfully from the remnants of the 1947 bequest of fungus cultures from the National Collection of Type Cultures. But these professional accomplishments hide a multitude of talents and are only the beginning. Major Dade is an expert draughtsman, a more than competent watercolourist, a clever cartoonist, and a skilful manipulator of both wood and metal. He has a sound knowledge of optics (as his recent presidential addresses to the Quekett Microscopical Club show) and the theory of colour (vide MYCOLOGICAL PAPER No. 6) together with an extensive knowledge of microscopical and mounting techniques.

He commanded the local Home Guard during the Second World War (and held a commission of Field rank in the 'Gunners' during the First), is an expert on bees, and his tastes include popularizing science, paper backs, and good food. On all these topics he is a mine of information. No longer, however, will the refrain 'I should ask Dade' deflect the awkward inquirer, no longer at tea shall we hear of the latest synthetic resin or be shown a use for which it was not intended to which some piece of optical equipment could be adapted. We shall have to rely on our own wits.

On 2 September there was a farewell tea party at which some of Major Dade's diverse interests were reflected by the confectionary. We all wished him and Mrs. Dade well then and do so again.

G.C.A.

MAPS

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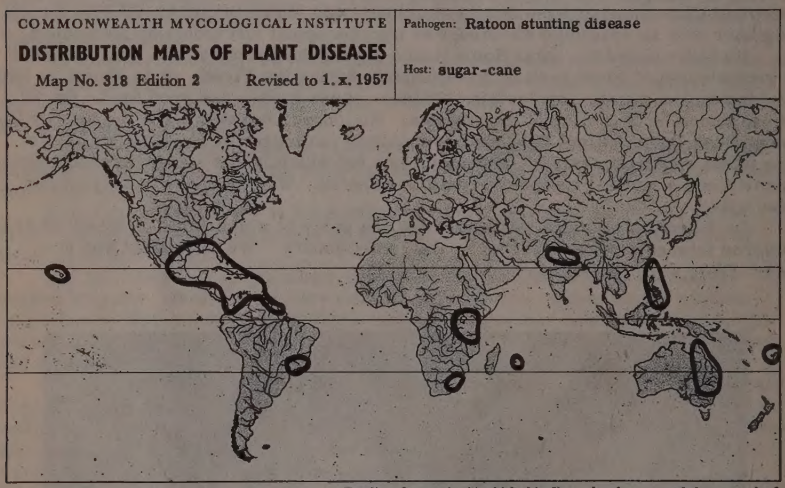
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